

Mining and Reclamation Plan of Operations

Kirkland High Quality Pozzolan Mine

Finding of No Significant Impact

DOI-BLM-AZ-P010-2017-0017-EA

December 2018



Background

Kirkland Mining Company, LLC (“KMC”) is proposing to mine “high quality” natural pozzolan (HQP) and remove a stockpile of finely-screened HQP from a previous mining operation (the Project) on land administered by the Bureau of Land Management (BLM). The Project is within the unpatented Capital One through Capital Twelve placer mining claims, and Capital Association Placer mining claim in Yavapai County near the town of Kirkland, Arizona.

The revised Draft Mining and Reclamation Plan of Operations (Draft MRPO) proposes mining and related operations on approximately 88 acres within 160 acres of land administered by the BLM (the MRPO Area) and 5 acres of KMC privately-held land¹ (the Project area). Operations would be conducted in accordance with BLM regulations published in the Code of Federal Regulations (CFR) at 43 CFR part 3809 (Surface Management) and 43 CFR 3715 (Use and Occupancy Under the Mining Laws), and would be consistent with the BLM’s Bradshaw-Harquahala Resource Management Plan (BLM 2010).

As part of the mining activities, KMC proposes ancillary activities and facilities associated with access (such as fueling, servicing, and storage of equipment) and weighing of the HQP for sale to customers on the adjacent lands privately-owned by KMC.

The HQP would be loaded onto trucks in the mine area and trucked to the scales located on KMC’s adjacent privately-owned lands, where they would be weighed and sent to market. All of the HQP will be transported from the mine with up to 25-ton transport haul trucks. Trucks will be sent to processing plants, and finished material will be sent on to the customer. Rail transport may occur for customers outside a 350-mile radius.

Determination

On the basis of the information contained in the *Mining and Reclamation Plan of Operations, Kirkland High Quality Pozzolan Mine Final Environmental Assessment* (EA) (DOI-BLM-AZ-P010-2017-0017-EA), I have determined that the Proposed Action does not constitute a major federal action having a significant effect on the human environment. Therefore an environmental impact statement (EIS) will not be required.

This finding is based on my consideration of the Council on Environmental Quality (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the *context* and *intensity* of the impacts described in the final EA, which is hereby incorporated by reference.

Context

The 165-acre Project area includes approximately 160-acres of BLM-administered land near Skull Valley, Arizona. Mining has been conducted at this location since the late 1800s. The area has been known throughout its history as the Arizona Tufa (“Magic Mountain”) Property, Ryneerson Quarry, Kirkland Tuff Quarry, Maverick Mine, Kitty Litter Mine, and Capital Quarry. In 1958, the Harold Ryneerson family leased the quarry to Capital Quarries to provide dimensioned stone for an addition to the Arizona State Capital Building. From 1979 until 1985

¹ Privately held lands are located within a portion of Section 29 of Township 13 North, Range 4 West, Gila and Salt River Baseline and Meridian.

the Kitty Litter Mine shipped the oil absorbent material from the mine. The stockpile that remained covers approximately 2.6 acres, and contains approximately 48,000 tons of high quality pozzolan. The transportation routes pass through the communities of Congress, Peebles Valley, Kirkland, Skull Valley and portions of Prescott, Arizona.

The Project area elevation ranges from approximately 4,020 feet above mean sea level (amsl) to 4,240 feet amsl, with the highest elevation occurring near the northeast corner of the Project area. The Project area is largely characterized by Interior Chaparral with patches of Semidesert Grassland and riparian vegetative communities. The bedrock within the Project area consists of stratified Miocene volcanic tuff and basalt. The tuff is exposed at the surface over most of the Project area.

Intensity

1) Impacts that may be both beneficial and adverse.

Under the Proposed Action, approval of the mine would meet the BLM's legal obligation under the Federal Land and Policy Management Act directing multiple use, and the General Mining Act of 1872. The Proposed Action would result in increased mining-related employment, and support the increased demand for materials needed for new construction in the region, a beneficial and long-term impact. The Proposed Action would result in the modification of approximately 88 acres of BLM-administered lands and 5-acres on adjacent privately-owned lands. Although the mine footprint would be mined in stages, the mining activity would adversely affect vegetation and associated wildlife habitats; these impacts would be both short- and long-term. Surface disturbing activities and noise would displace wildlife into surrounding available habitat, an adverse and long-term impact. Within the mine operation area, there would be an introduction of noise from truck traffic and equipment, nighttime lighting at the staging area, and alteration of the visual character within the footprint of the mine. These impacts would be long-term and adverse. The Proposed Action would result in increased transport truck traffic along three transportation routes, an adverse and long-term impact. Potential adverse impacts have been addressed through voluntarily applicant-committed avoidance or minimization measures in order to prevent unnecessary or undue degradation of public lands. None of the direct, indirect and cumulative impacts analyzed in the Final EA would be significant.

2) The degree to which the proposed action affects public health or safety.

The majority of the material found in the Project area is volcanic ash, a type of silica that is not a known carcinogen. Based on testing conducted by the BLM, only a very small quantity (generally less than two volume percent) crystalline silica was identified in the form of quartz. During the life of the mine, industry-standard controls would be followed to protect mine workers and the public from exposure. "Dust opacity" would be monitored by the Arizona Department of Environmental Quality in order to ensure the risk of exposure by mine workers and the public is minimal.

The BLM and Kirkland Mining Company LLC have voluntarily completed sampling within the Project area for the presence of certain carcinogens, including asbestos and erionite. Based on sampling, neither asbestos nor erionite is present. To ensure continued mine worker and public health, the operator has voluntarily committed to continue to test in the Project area.

The off-site transportation of mined material would involve 160 truck trips per day along three transportation routes. The BLM has considered the potential impacts (such as noise, air quality, increased traffic) along the routes, including the sensitive receptors such as schools, churches etc. Overall traffic volume from employee and transport truck traffic would increase no more than 15.9 percent. During public outreach, there were concerns raised about potential increase in vehicle accidents, and impediments to emergency vehicles behind slower moving transport trucks. Compliance with highway and street laws such as speed limits and when it is safe to pass, are outside the jurisdiction of the BLM.

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

Within the Project area, there are no park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas such as Areas of Critical Environmental Concern. Six cultural sites eligible for listing on the National Register of Historic Places (NRHP) occur within the Project area (see item #8 below).

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The Proposed Action is not highly controversial². The BLM analyzed the size, effects and nature of the proposal. During public scoping and public review of the “draft” EA, there was considerable public interest in the project. The BLM completed extensive public outreach and extended the scoping period in order to ensure that the BLM considered all relevant comments on the project. Issues of primary concern included: impacts to air quality; water resources; road system; and public health and safety (see item #5 below).

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The effects of the on-site mining operation are well understood and do not pose highly uncertain or involve unique or unknown risks. The effects of the off-site transport of mined materials, and use of wells to provide water for dust suppression are also well understood. The potential direct, indirect and cumulative impacts have been analyzed, and where appropriate the applicant has committed to voluntary measures to avoid or minimize impacts to biological or cultural resources.

See previous discussion in item #2 regarding silica, asbestos and erionite.

The applicant has not determined what specific amount of transport truck traffic would occur on each of the three proposed transportation routes. In the Final EA the BLM considered a worst-case, or maximum rate of 160 truck trips per day along each of the three transportation routes. Based on market-demand, the actual amount of truck trips per day would likely be less on each route. Even in the worst-case scenario, no individual route would experience a significant increase in traffic volume (maximum increase of 15.9 percent).

² According to the Interior Board of Land Appeals in 88 IBLA 143, the term “highly controversial” refers to a “substantial dispute as to the size, nature or effect of a major federal action rather than to the existence of opposition to a use.”

The baseline study that evaluated the potential impacts to the aquifer in the Skull Valley area has concluded that over the life of the mine, the water table would be expected to decrease by no more than two feet. This determination was made based on the use of 35,000 gallons per day (gpd), however this is a worst-case scenario as recent site testing conducted in October 2017 indicates that actual water demand may be less than half that amount (approximately 14,400 gpd).

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Proposed Action does not establish a precedent for future actions. Any new request submitted to the BLM not considered in the Final EA would be subject to new environmental review.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The Proposed Action is not related to other actions with individually insignificant but cumulatively significant impacts. The Final EA analyzed the on-site impacts from the mining operation and off-site impacts along three proposed transportation routes. The Final EA also analyzed the off-site impacts associated with use of water for dust suppression from wells in Skull Valley.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the NRHP or may cause loss or destruction of significant scientific, cultural, or historical resources.

Six cultural resource sites were identified during survey of the 165-acre Project area; four of these sites have been determined to be eligible for listing on the National Register of Historic Places (NRHP). Of the four eligible sites, three of these sites are prehistoric cultural sites with rock shelters, artifacts, and one site with petroglyphs and one is a historic cultural site, the Capital Quarry from previous mining.

On September 1, 2017, the BLM initiated consultation under the NHPA with the Arizona State Historic Preservation Office (SHPO). Based on revisions to the Project, on May 15, 2018 updated consultation information was provided to the SHPO with the final delineation of the Area of Potential Effect (APE), determination of eligibility, and determination of effect (BLM 2018a). The BLM determined that the APE is the 165-acre Project area. The BLM also determined that the off-site transportation network was not a part of the Project's APE as there would be no effect to cultural resource sites. On June 4, 2018, the BLM received concurrence from SHPO, including the following: 1) the SHPO concurred in the BLM's determination of site eligibility; 2) the SHPO concurred in the BLM's determination that the Project would have "no adverse effect" to eligible sites within the Project area; and 3) the SHPO concurred in the BLM's determination that there is no potential to affect historic properties along the proposed transportation routes.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the ESA or 1973.

The BLM has determined that the Project would have “no effect” on the yellow-billed cuckoo (*Coccyzus americanus*). A pedestrian survey of the Project area occurred in 2015 and found there was no suitable habitat. The Project area has been visited by a BLM wildlife biologist and the riparian corridors that traverse the Project area were surveyed following U.S. Fish and Wildlife Service protocols for the yellow-billed cuckoo in June 2018 and none were detected. The mine disturbance area avoids impacts to riparian habitats. The BLM has found the riparian habitat near the mine is unsuitable for nesting as the vegetation is too sparse. Vegetation along the drainage that crosses the proposed mine entrance road that would be improved as part of the Proposed Action is sparse and unsuitable for nesting. There is no proposed or designated critical habitat for threatened or endangered species within the Project area.

10) Whether the action threatens a violation of federal, State, or local law or requirements imposed for the protection of the environment.

The Proposed Action does not threaten to violate federal, State, or local law or requirements for the protection of the environment.



Rem Hawes
Field Manager
Hassayampa Field Office

12/3/2018
Date